

CALIFORNIA ENERGY COMMISSION

DIVISION OF FINANCIAL SERVICES
GRANTS & LOANS
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**Combined List of All Notice of Proposed Awards and Results of Submitted
Proposals**

**American Recovery and Reinvestment Act of 2009 Cost Share
PON-08-011**

**(DE-FOA 0000015, 0000032, 0000033, 0000036, 0000055, 0000057, 0000058,
0000065, 0000075, 0000082, 0000085, 0000092, 0000099, 0000107, 0000109,
0000115, 0000118, 0000120, 0000122)**

December 29, 2010

On June 18, 2009 the California Energy Commission (Energy Commission) released a Program Opportunity Notice (PON) and Grant Solicitation and Application Package PON-08-011 entitled “American Recovery and Reinvestment Act (ARRA) of 2009 Cost Share” under the Public Interest Energy Research (PIER) Program. The solicitation announced that the Energy Commission plans to allocate up to \$21 million of electricity funds for Cost Share. The grant solicitation was released to offer cost share funding to those applying and receiving ARRA grant funding from the federal government under one or more of the following federal opportunity announcements (herein collectively referred to as FOAs):

- FOA 0000015: Carbon Capture and Sequestration from Industrial Sources and Innovative Concepts for Beneficial CO₂ Use
- FOA 0000032: Geologic Sequestration Training and Research
- FOA 0000033: Site Characterization of Promising Geologic Formations for CO₂ Storage
- FOA 0000036: Smart Grid Demonstrations
- FOA 0000055: Solid State Lighting Product Development – Round VI
- FOA 0000057: Solid State Lighting U.S. Manufacturing – Round 1
- FOA 0000058: Smart Grid Investment Grant Program
- FOA 0000065: Advanced Research Projects – Energy (ARPA-E)
- FOA 0000075: Enhanced Geothermal Systems Component Research and Development Analysis
- FOA 0000082: Solid State Lighting Core – Round IV
- FOA 0000085: High Penetration Solar Deployment
- FOA 0000092: Enhanced Geothermal Systems Demonstration
- FOA 0000099: Building America Energy Efficient Housing
- FOA 0000107: Energy Efficient Information and Communication Technology
- FOA 0000109: Geothermal Technologies Program
- FOA 0000115: Advanced Energy Efficient Building Technologies
- FOA 0000118: Training Program Development for Commercial Buildings Equipment Technicians, Building Operators
- FOA 0000120: Hydroelectric Facility Modernization

- FOA 0000122: Community Renewable Energy Deployment

In accordance with the grant solicitation and application package, each proposal was screened for completeness and reviewed by Energy Commission staff. The letters of intent for cost share were issued to the successful pre-applicants, who were directed to submit final applications to the Energy Commission. The Energy Commission's Technical Advisory Committee (TAC) reviewed, evaluated, and scored final applications, using the criteria prescribed in the application package, including requirement of receiving ARRA award from the federal government. Based on the TAC's scores and directions from the RD&D Committee, the proposed matching funding is recommended for the FOAs.

The attached table "Combined List of All Notice of Proposed Awards and Results of Submitted Proposals" identifies applicants selected to receive funding, the project title, the amount of recommended funding by the RD&D Committee, and scoring information. The attached supersedes the previous Notice of Proposed Awards (NOPAs) issued on November 9, 2009, December 8, 2009, December 30, 2009 and April 15, 2010 for PON-08-011. Please note that the attached NOPA has scores for those that are recommended for awards. Those without scores are not awarded for the reasons indicated by the footnote. **The attached NOPA is only for PON-08-011 and does not affect the NOPA for PON-09-002.**

If the applicant receives ARRA funding from the federal government, the Energy Commission's cost share is contingent upon the approval of the requested funding during a Commission Business Meeting. This notice is being mailed to all parties who submitted a proposal to this solicitation and is also posted on the Energy Commission Web Site:
<http://www.energy.ca.gov/contracts/index.html>

Persons wishing further information about this matter may contact Pedro Gomez at (916) 653-4278 or by email pgomez@energy.state.ca.us.

California Energy Commission

Public Interest Energy Research Program (PIER)

Combined List of All Notice of Proposed Awards and Results of Submitted Proposals

Solicitation PON-08-011

DE-FOA 0000015, 0000032, 0000033, 0000036, 0000055, 0000057,
0000058, 0000065, 0000075, 0000082, 0000085, 0000092, 0000099,
0000107, 0000109, 0000115, 0000118, 0000120, 0000122



American Recovery and Reinvestment Act of 2009 Cost Share



FOA 0000015: Carbon Capture and Sequestration from Industrial Sources and Innovative Concepts for Beneficial CO2 Use

Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	Estimated DOE Funding Award	Score
1	C6 Resources LLC	Northern California Carbon Dioxide Reduction Project	\$300,000	\$300,000	\$3,000,000	80
2	Calera Corporation	Carbon Mineralization by Aqueous Precipitation for Beneficial Use of CO ₂ from Flue Gas	\$300,000	\$300,000	\$1,670,360	80
0	Clean Energy Systems	Kimberlina Zero Emissions Power Plant with Carbon Dioxide Capture and Sequestration	\$300,000	\$0		(2)
0	Origin Oil	Carbon Capture Pilot Project	\$191,606	\$0		(2)
Total Funds Recommended			\$1,091,606	\$600,000	\$4,670,360	

FOA 0000032: Geological Sequestration Training and Research

Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	DOE Funding Requested	Score
	No applicants					
Total Funds Recommended			\$0	\$0	\$0	

FOA 0000033: Site Characterization of Promising Geologic Formations for CO2 Storage

Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	DOE Funding Requested	Score
	No applicants					
Total Funds Recommended			\$0	\$0	\$0	

FOA 0000036: Smart Grid Demonstrations

Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	DOE Funding Requested	Score
1	Pacific Gas and Electric	Advanced Underground CAES Demonstration Project	\$1,000,000	\$1,000,000	\$25,000,000	91
2	Southern California Edison	Irvine Smart Grid Demonstration	\$1,000,000	\$1,000,000	\$40,134,700	87
3	Southern California Edison	Tehachapi Wind Energy Storage Project	\$1,000,000	\$1,000,000	\$24,978,264	86
4	Los Angeles Department of Water and Power	Smart Grid Regional Demonstration Project	\$1,000,000	\$1,000,000	\$60,280,000	84
5	Primus Power	Wind Firming Energy Farm	\$1,000,000	\$1,000,000	\$14,000,000	70
0	Fluidic Energy Inc.	Multi-site Demonstration of Promising Energy Storage Technology	\$475,000	\$0		(2)
0	Utility Savings and Refund LLC	Demonstration of Vanadium Redox Flow Battery with On-Site Generation	\$150,000	\$0		(2)
0	Sacramento Municipal Utility District	Distributed Energy Storage Pilot at Anatolia	\$1,000,000	\$0		(2)
0	UC San Diego	Smart Grid Demonstration Area 2.2	\$500,000	\$0		(2)
0	UC San Diego	Smart Grid Demonstration Area 2.3	\$500,000	\$0		(2)
0	CSU Sacramento	Active Management and Integration of Smart Grid Resources with Dynamic Pricing for Electricity	\$1,000,000	\$0		(2)
0	San Diego Gas and Electric	Secure End-to-End Smart Green Grid Demonstration	\$1,000,000	\$0		(2)
0	CSU Office of the Chancellor	Smart Grid Demonstration Program	\$1,000,000	\$0		(2)

0	Eutricity, Inc.	Networked Intelligent Energy Optimized Building Integration Platform	\$1,000,000	\$0		(2)
0	Seeo, Inc.	Solid State Batteries of Grid Scale Energy Storage	\$1,000,000	\$0		(2)
Total Funds Recommended			\$12,625,000	\$5,000,000	\$164,392,964	

FOA 0000055: Solid State Lighting Product Development - Round VI

Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	DOE Funding Requested	Score
0	Progressive Cooling Solutions, Inc.	Novel cooling Technology Enables Metal Halide Replacement with LED	\$200,000	\$0		(3)
0	Eutricity, Inc.	Off-Grid Reactive LED Smart Lamps	\$100,000	\$0		(3)
0	Eutricity, Inc.	Grid Reactive LED Smart Lamps	\$200,000	\$0		(3)
Total Funds Recommended			\$500,000	\$0	\$0	

FOA 0000057: Solid State Lighting U.S. Manufacturing - Round 1

Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	DOE Funding Requested	Score
0	Atomic Precision Systems, Inc.	Technology to Manufacture	\$499,900	\$0		(2)
Total Funds Recommended			\$499,900	\$0	\$0	

FOA 0000058: Smart Grid Investment Grant Program

Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	DOE Funding Requested	Score
1	San Diego Gas and Electric (Sempra Energy)	Advanced Metering Infrastructure	\$1,000,000	\$1,000,000	\$28,115,052	89
2	Pacific Gas and Electric	Electric Transmission Systems	\$1,000,000	\$1,000,000	\$22,000,000	80
3	Sacramento Municipal Utility District	Integrated and Crosscutting Systems	\$1,000,000	\$1,000,000	\$127,506,261	75
4	City of Anaheim	Integrated and Crosscutting Systems	\$590,000	\$589,603	\$5,896,025	72
0	Electric Power Group, LLC	SynchroPhaser Technology Investments and Implementation	\$1,000,000	\$0		(2)
0	City Electric Utility, Silicon Valley Power	Advanced Metering Infrastructure	\$1,000,000	\$0		(2)
0	Pacific Gas and Electric	Advanced Metering Infrastructure	\$1,000,000	\$0		(2)
0	Joint Ventures: Silicon Valley Network	Customer Systems	\$900,000	\$0		(2)
0	UC San Diego	Customer Systems	\$1,000,000	\$0		(2)
0	Southern California Public Power Authority	Equipment Manufacturing	\$1,000,000	\$0		(2)
0	City of Glendale Water and Power	Advanced Metering Infrastructure	\$1,000,000	\$0		(3)
Total Funds Recommended			\$10,490,000	\$3,589,603	\$183,517,338	

FOA 0000065: Advanced Research Projects - Agency-Energy (ARPA-E)

Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	DOE Funding Requested	Score
1	Porifera, Inc.	Carbon Nanotube Membranes for Energy Efficient Carbon Sequestration	\$107,790	\$115,397	\$1,153,975	92
0	Stanford University	Large Scale Energy Reductions through Sensors, Feedback and Information Technology	\$500,000	\$0		(4)
0	One Cycle Control, Inc.	Hexagram Variable Speed Drive for Multi MW Motors	\$300,000	\$0		(2)

0	UC Santa Cruz	Luminescent Solar Concentrators Using Existing US Manufacturing Technology	\$260,000	\$0		(4)
0	EnerVault	High Efficiency, Low Cost, Grid Scale Energy Storage System	\$416,000	\$0		(2)
0	Seeo, Inc,	Lithium Batteries with Solid State Electrolytes	\$500,000	\$0		(2)
0	Porifera, Inc.	Carbon Nanotube Membranes for Osmotic Power Generation	\$144,766	\$0		(2)
0	Amprius, Inc.	Doubling the Energy Density of Lithium Ion Batteries	\$500,000	\$0		(2)
0	Directed Technologies	Electro Hydrothermal Spallation Drill for Widespread EGS Deployment	\$500,000	\$0		(2)
0	Calera Corporation	Aqueous Carbonate Mineral Precipitation: Multi Level Pollution Control Option	\$422,166	\$0		(2)
0	E-Solar	Solar Air Receiver and Gas Turbine System	\$500,000	\$0		(2)
Total Funds Recommended			\$4,150,722	\$115,397	\$1,153,975	

FOA 000075: Enhanced Geothermal Systems Component Research and Development Analysis

Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	DOE Funding Requested	Score
1	Potter Drilling, Inc.	Development of a Non-Contact Drilling System for EGS	\$380,000	\$380,000	\$5,000,000	77
0	Imageair, Inc.	Monitoring Surface Deformation	\$210,000	\$0		(2)
0	Perlorica Inc.	Demonstration of Colloidal and Precipitated Silica Recovery	\$380,000	\$0		(2)
0	Thermochem, Inc.	Advanced Geothermal Tracer Development and Interpretation	\$337,173	\$0		(2)
0	Thermochem, Inc.	High Temperature Downhole Two Phase Sampling	\$380,000	\$0		(2)
Total Funds Recommended			\$1,687,173	\$380,000	\$5,000,000	

FOA 0000082: Solid State Lighting Core - IV

Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	DOE Funding Requested	Score
0	Lightwave Photonics	Improved LED Performance Via Purcell Effect and Photon Recycling	\$200,000	\$0		(2)
Total Funds Recommended			\$200,000	\$0	\$0	

FOA 0000085: High Penetration Solar Deployment

Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	DOE Funding Requested	Score
1	UC, San Diego	High Solar PV Penetration Modeling	\$500,000	\$500,000	\$1,750,000	82
2	SMUD	SMUD's Smart Grid Pilot at Anatolia	\$500,000	\$500,000	\$4,300,971	76
0	BEW Engineering	Positive Sequence Simulation Models for Solar PV Systems	\$250,000	\$0		(3)
0	Southern California Edison	High Penetration Solar Deployment on Catalina Island	\$500,000	\$0		(3)
0	BEW Engineering	Advanced Distribution Grid Modeling Tools Developments	\$361,416	\$0		(3)
Total Funds Recommended			\$2,111,416	\$1,000,000	\$6,050,971	

FOA 0000092: Enhanced Geothermal Systems Demonstration

Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	DOE Funding Requested	Score
0	Calpine Corporation	Buckeye Alder Creek	\$250,000	\$0		(2)
0	Calpine Corporation	Shallow Low Rate Injection	\$250,000	\$0		(2)
0	Calpine Corporation	Wildhorse-Binkley	\$250,000	\$0		(2)
Total Funds Recommended			\$750,000	\$0	\$0	

FOA 0000099: Building America Energy Efficient Housing

Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	DOE Funding Requested	Score
0	Build it Green	Retrofit California	\$200,000	\$0		(2)
Total Funds Recommended			\$200,000	\$0	\$0	

FOA 0000107: Energy Efficient Information and Communication Technology

Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	DOE Funding Requested	Score
0	UC San Diego	Renewable Bio-fueled 400 VDC Modular Data Center	\$250,000	\$0		(2)
0	Clustered Systems	Development of Very Dense Liquid Cooled Computer Platform	\$250,000	\$0		(4)
0	Federspiel Controls, Inc.	Demonstration of Energy Efficient Cooling Scheme - Dynamic Data Center Cooling Control Communication Technology	\$250,000	\$0		(4)
Total Funds Recommended			\$750,000	\$0	\$0	

FOA 0000109: Geothermal Technologies Program

Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	DOE Funding Requested	Score
1	Calpine Corporation	Caldwell Ranch Exploration and Confirmation Project	\$410,000	\$410,000	\$5,000,000	70
0	Calpine Corporation	East Ford Flat Exploration Project	\$410,000	\$0		(2)
0	Calpine Corporation	Rorabaugh Exploration and Confirmation Project	\$410,000	\$0		(2)
0	Calpine Corporation	Buckeye Exploration and Confirmation Project	\$410,000	\$0		(2)
0	Calpine Corporation	Wildhorse Exploration and Confirmation Project	\$410,000	\$0		(2)
0	Calpine Corporation	Binkley Exploration and Confirmation Project	\$410,000	\$0		(2)
0	Bottle Rock Power, LLC	Northeast Geysers Drilling Innovations	\$410,000	\$0		(2)
Total Funds Recommended			\$2,870,000	\$410,000	\$5,000,000	

FOA 0000115: Advanced Energy Efficient Building Technologies

Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	DOE Funding Requested	Score
0	Davis Energy Group, Inc.	Development, Testing and Commercialization of Advanced Residential Cooling Technologies	\$180,000	\$0		(2)
0	Davis Energy Group, Inc.	Development and commercialization of Perimeter Insulation for Residential Slabs	\$220,000	\$0		(2)
0	TIAX LLC	Modeling Miscellaneous Electric Loads in Commercial Buildings	\$400,000	\$0		(2)
0	Nrgtek, Inc.	Unitized Residential Solar Thermoelectric Power Hot Water Systems	\$400,000	\$0		(2)

0	Redwood Renewables LLC	Redwood Renewables Cool Roof Manufacturing Process	\$300,000	\$0		(2)
0	Agilewaves	Performance Measurement and Benchmarking for Net Zero Buildings	\$358,297	\$0		(2)
0	Viridity Energy, Inc.	Advanced Energy Storage Management and Optimization	\$400,000	\$0		(2)
0	Pyramid Solar Renewables, LLC	solar Building Materials for Thermal, Photovoltaic, and Lighting	\$400,000	\$0		(3)
0	Pyramid Solar Renewables, LLC	Solar Building Materials for Commercial Space Conditioning and Water	\$400,000	\$0		(3)
0	Glumac	Barton Memorial Hospital Central Plant Replacement	\$400,000	\$0		(3)
0	Thrive Power	R&D with Prototype of Solar CHP-AC	\$350,000	\$0		(3)
0	Joule Energy, Inc.	Emerging Technologies Refrigerated Warehouse Projects	\$260,000	\$0		(3)
0	Solar Sense	Solar Panel Installation, Maintenance and Repair	\$100,000	\$0		(3)
0	Eutricity, Inc.	LED Smart Lamp Based Building Energy and Sensor Network	\$400,000	\$0		(3)
0	Pyramid Solar Renewables, LLC	Solar Building Materials for Commercial Space Conditioning and Water	\$400,000	\$0		(3)
0	ASR Systems	Model Based Design and Control of Buildings for Minimizing Energy	\$400,000	\$0		(3)
0	California Lighting Technology Center, UC Davis	Capitol Rotunda Efficient LED Lighting	\$250,000	\$0		(3)
0	Green Design Systems	Straw Building Panel Project	\$96,500	\$0		(3)

0	Ecological Building Network	Research and Promote Straw Based Insulation Systems	\$400,000	\$0		(3)
Total Funds Recommended			\$6,114,797	\$0	\$0	
FOA 0000118: Training Program Development for Commercial Buildings Equipment Technicians, Building Operators						
Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	DOE Funding Requested	Score
1	Portland Energy Conservation, Inc.	Curriculum for Developing Energy Efficient Buildings	\$120,026	\$120,000	\$749,153	84
0	Pacific Gas and Electric	Integrated Training and Resource Packages for Small and Medium Commercial Building Audits	\$120,000	\$0		(2)
0	Laney College	Green Remodeling of Community College Curriculum for Commercial Building Operators	\$120,000	\$0		(2)
0	Institute for Sustainable Building Performance (SuPerB)	For Equipment Technicians: PBCS Scenarios for Low Energy Buildings	\$120,000	\$0		(4)
0	Institute for Sustainable Building Performance (SuPerB)	For Building Operators: PBCS Scenarios for Low Energy Buildings	\$120,000	\$0		(4)
0	Institute for Sustainable Building Performance (SuPerB)	For Commissioning Agents/Auditors: PBCS Scenarios for Low Energy Buildings	\$120,000	\$0		(4)
0	Sacramento City College	Program for commercial Building Energy Commissioning Agents/Auditors	\$120,000	\$0		(4)
Total Funds Recommended			\$840,026	\$120,000	\$749,153	
FOA 0000120: Hydroelectric Facility Modernization						
Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	DOE Funding Requested	Score
	No applicants					
Total Funds Recommended			\$0	\$0	\$0	

FOA 0000122: Community Renewable Energy Deployment						
Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended ⁽¹⁾	DOE Funding Requested	Score
1	Sacramento Municipal Utility District	SMUD Community Renewable Energy Deployment	\$500,000	\$500,000	\$5,000,000	83
0	City of Anaheim Public Utilities	Anaheim Convention Center Photovoltaic and Energy Storage	\$500,000	\$0		(2)
Total Funds Recommended			\$500,000	\$500,000	\$5,000,000	
Grand total			\$45,380,640	\$11,715,000	\$375,534,761	
⁽¹⁾ All PIER funds recommended in this NOPA are contingent on applicant receiving ARRA funds from DOE and approval of the proposed agreement at an Energy Commission Business Meeting. Actual award amounts depend on actual DOE funding amounts (Energy Commission contribution restricted to limits set in PON- 09-002 for the specified by FOA#).						
⁽²⁾ Proposal did not meet the requirements of an eligible project. ⁽³⁾ Proposal did not meet minimum Technical Score of 70 points ⁽⁴⁾ Applicant did not submit final application						
Dated: December 29, 2010						
Expires: January 5, 2011						